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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,625	11/06/2001	Michael A. Barrese	BARRESE 1-1-1-2	5807

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EXAMINER

JAMAL, ALEXANDER

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,625

Applicant(s)

BARRESE ET AL.

Examiner

Alexander Jamal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) 14-17 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13 and 18-22 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☒ Claim(s) 14-17 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-13,18-22 are drawn to the structure power supply for a subscriber line interface, classified in Class 379, subclass 413.
 - II. Claims 14-17 are drawn to the structure of an initiating circuit (supplying host power) based upon an input (line) power level, classified in class 327, subclass 143.

The inventions are distinct each from the other because of the following reasons:

2. Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product (invention II) is deemed to be useful as used in any device requiring a power supply and connected to any type of power line, and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions

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anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Mark Kurisko on September 7th, 2004 a provisional election was made without traverse to prosecute application 09/992625, **claims 1-13 and 18-21**. Affirmation of this election must be made by applicant in replying to this Office action. **Claims 14-17** are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims **1, 5-13** rejected under 35 U.S.C. 103(a) as being unpatentable over Newton (6212226), and further in view of Johnson (4008427).

As per **claim 1**, Newton discloses a power supply comprising telephone line interface 100 (Fig. 5), a PWM power supply (converter) 202, oscillator 208, pulse circuit 204. However, Newton does not specify a gyrator or an inductor in the circuit.

Johnson discloses a description of a PWM power supply that produces a regulated output for a large range of input voltages (Col 1 lines 1-35). Johnson's circuit (Fig. 1) comprises inductor 40 coupled to pulse circuit 32, and outputting to converter 20. It would have been obvious to one of ordinary skill in the art at the time of this application to implement Johnson's PWM switching circuit for the advantage that it can operate over a wide range of input voltages (such as the wide range of voltages seen on telephone lines).

Newton discloses a telephone line interface 100 that isolates and extracts both an information and power signal (Col 3 lines 30-60). Examiner takes official notice that it is well known in the art to use gyrators in subscriber terminals for the purpose of isolating and extracting data and power signals. This is discussed in applicant's specification page 5 lines 16-22.

As per **claim 5**, Newton discloses a telephone line interface 100 that isolates and extracts both an information and power signal (Col 3 lines 30-60). Examiner takes official notice that it is well known in the art to use polarity guards when interfacing with the phone line for the advantage of protecting against tip/ring reversal (unknown polarity)

form the telephone line. This is disclosed as prior art in applicant's specification page 5 lines 10-15.

As per **claim 6**, Newton discloses a startup circuit comprising shunt impedance 200 and oscillator 208 (Col 5 lines 1-16).

As per **claim 7**, Newton discloses shunt regulator 402 (Fig. 4) at the output of the converter.

As per **claim 8**, Johnson discloses switches 14 and 16 (Fig. 1) located between the inductor and after the gyrator (the gyrator would be located at filter 30 when combined with the invention of Newton).

As per **claims 9,10**, Newton in view of Johnson discloses a divider 12 coupled to the oscillator 10 (JOHNSON: Fig. 1), a transformer 20 with a center tap coupled to inductor 40, a dual switches (with clamping circuits) 14 and 16, and a rectifier circuit coupled to the primary winding of the transformer (JOHNSON: Col 3 lines 3-22)

As per **claims 11,12**, the electrical device is a modem with a rechargeable battery (NEWTON: Fig. 2).

As per **claim 13**, Newton discloses that the oscillator frequency used to drive the PWM to pulse the inductor with current should operate at 20 KHz or greater (approximately 500KHz) so as to be out of the audible range of frequencies.

7. **Claims 18-22,2-4** rejected under 35 U.S.C. 103(a) as being unpatentable over Newton (6212226) and Johnson (4008427), and further in view of Lui (6624635).

As per **claims 18,19,2,3**, Newton and Johnson disclose applicant's claim 1, but do not disclose a combiner coupled to a host supply in order to supplement the line power with the host power whenever the voltage level falls below a predetermined level.

Lui discloses a power supply for a subscriber terminal that comprises a combiner to supplement the line power if the line power falls to a certain level (Col 3 lines 35-64). He further discloses that the combiner may comprise a diode. It would have been obvious to one of ordinary skill in the art at the time of this application to implement a combiner to make use of a host power source (battery) for the advantage of increasing the reliability of the system.

As per **claims 21,22**, claims rejected for the same reasons as the rejection of claim 18. The device of the rejection would perform the method of claims 21, 22.

As per **claims 4,20**, Liu discloses the use of a diode but does not specify that it is a Schottky diode. It would have been obvious to one of ordinary skill in the art at the time of this application to make a design choice regarding the type of diode used. Since Liu's device is used to provide DC voltage levels for Modem circuitry the voltage levels would be small, as such, when using a diode to combine the supplemental battery power, it would be obvious to choose one with a low voltage drop so that the supply voltage levels do not drop to unusable levels before the diode is forward biased.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 703-305-3433. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 703-305-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9315 for After Final communications.

AJ
September 17, 2004


CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
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